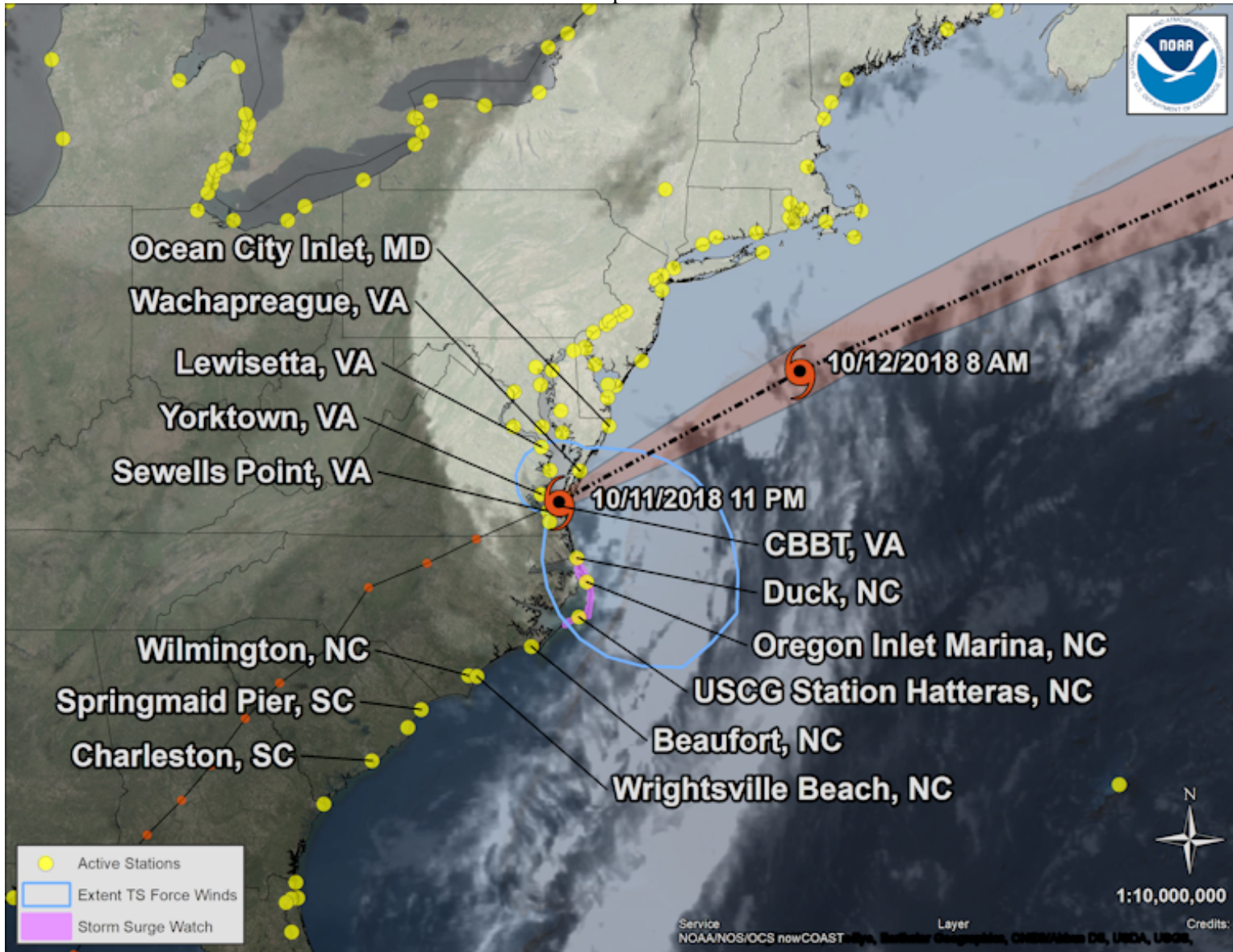




# Tropical Storm Michael QuickLook Posted: 00:00 EDT 10/12/2018

## NOAA and NOAA Partnership Stations Relative to the Storm



## Storm Analysis

As of 10/12/2018 00:00 EDT, water levels along the Atlantic coast from North Carolina to Maryland, including Pamlico Sound and the lower Chesapeake Bay, are elevated and rising. Within Pamlico Sound, water levels are presently measuring between 2.0 to 4.2 feet above normal tide levels. Water levels within the entrance of the lower Chesapeake Bay are measuring 1.1 to 2.1 feet above normal tide levels. Water levels along the coastal Delmarva Peninsula are also rising and are presently measuring 1.1 to 1.8 feet above normal tide levels. Water levels at

locations along coastal NC and SC, which are south of Tropical Storm Michael, are at or below normal tide levels.

Winds within Pamlico Sound and the lower Chesapeake Bay are increasing and range between 20 and 45 knots with higher gusts. Barometric pressure is falling along the Delmarva Peninsula and is rising at all locations from Chesapeake Bay to South Carolina.

Water Level and Meteorological plots available below are updated automatically. A line denoting Mean Higher High Water (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional real-time and historical inundation information for select stations affected by this storm, please visit Coastal Inundation Dashboard. For additional data, please see the Center for Operational Oceanographic Products & Services website.

For more information or archived products and reports, please visit the Storm QuickLook Homepage.

Analyst: CMF

-----  
Select National Hurricane Center Advisory:

Tropical Storm Michael Advisory Number 22  
NWS National Hurricane Center Miami FL AL142018  
1100 PM EDT Thu Oct 11 2018

...MICHAEL ABOUT TO MOVE OFF THE VIRGINIA COAST AND BECOME POST TROPICAL...  
...DAMAGING WINDS AND LIFE-THREATENING FLASH FLOODING STILL OCCURRING OVER  
PORTIONS OF NORTH CAROLINA AND THE SOUTHERN MID-ATLANTIC...

#### WATCHES AND WARNINGS

#### ----- CHANGES WITH THIS ADVISORY:

The Tropical Storm Warning has been discontinued west of Cape Lookout North Carolina.

#### SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Watch is in effect for...

\* Ocracoke Inlet North Carolina to Duck North Carolina

A Tropical Storm Warning is in effect for...

\* Cape Lookout North Carolina to Duck North Carolina

\* Pamlico and Albemarle Sounds

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area.

A Storm Surge Watch means there is a possibility of life-threatening inundation, from rising water moving inland from the coastline.

For storm information specific to your area, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office.

## DISCUSSION AND OUTLOOK

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At 1100 PM EDT (0300 UTC), the center of Tropical Storm Michael was located near latitude 37.1 North, longitude 76.1 West. Michael is moving toward the northeast near 25 mph (41 km/h). An east-northeastward motion with a significant increase in forward speed is expected during the next couple of days. On the forecast track, the center of Michael will move off the coast of Virginia within the next hour or two and then begin to race east-northeastward across the northwestern Atlantic Ocean.

Maximum sustained winds are near 50 mph (85 km/h) with higher gusts. Michael is expected to become a post-tropical low overnight and then intensify over the western Atlantic on Friday.

Tropical-storm-force winds extend outward up to 275 miles (445 km), primarily over water to the southeast of the center.

The estimated minimum central pressure is 988 mb (29.18 inches).

## HAZARDS AFFECTING LAND

-----  
**STORM SURGE:** The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water has the potential to reach the following heights above ground if peak surge occurs at the time of high tide...

Sound side of the North Carolina Outer Banks from Ocracoke Inlet to Duck...2-4 ft

**WIND:** Tropical storm conditions are occurring over portions of extreme eastern North Carolina, including the Outer Banks.

Gale- to storm-force winds are expected over portions of southeastern Virginia, extreme northeastern North Carolina, and the Delmarva Peninsula overnight and Friday morning when Michael becomes post-tropical off the Mid-Atlantic coast.

**RAINFALL:** Michael is expected to produce total rain accumulations of 3 to 5 inches across southeast Virginia, southeast Maryland, Delaware, and southern New Jersey. Isolated maximum totals of 7 inches are possible. This rainfall could lead to life-threatening flash floods.

Rainfall totals of 1 to 3 inches are expected across the coastal northern Mid-Atlantic and southern New England.

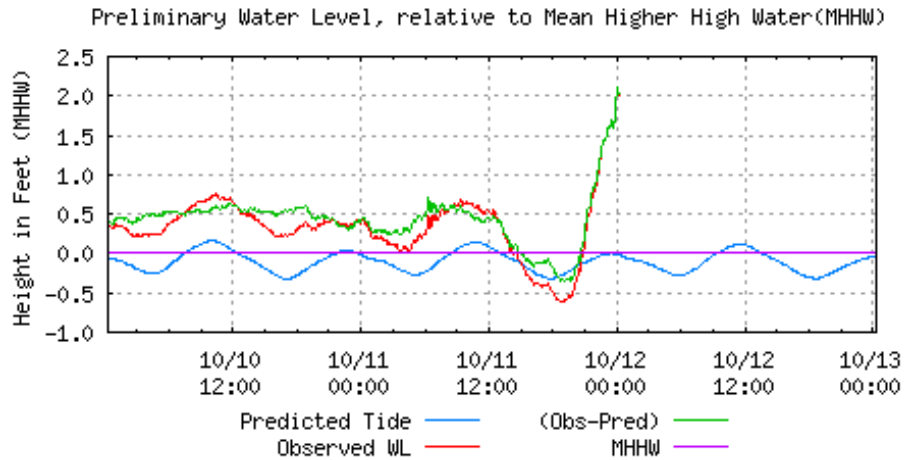
Forecaster Berg

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: [USCG Station Hatteras - Water Level](#), [USCG Station Hatteras - Winds](#), [USCG Station Hatteras - Barometric](#), [Oregon Inlet Marina - Water Level](#), [Oregon Inlet Marina - Winds](#), [Oregon Inlet Marina - Barometric](#), [CBBT, Chesapeake Channel - Water Level](#), [CBBT, Chesapeake Channel - Winds](#), [CBBT, Chesapeake Channel - Barometric](#), [Sewells Point - Water Level](#), [Sewells Point - Barometric](#), [Yorktown USCG Training Center - Water Level](#), [Yorktown USCG Training Center - Winds](#), [Yorktown USCG Training Center - Barometric](#), [Lewisetta - Water Level](#), [Lewisetta - Winds](#), [Lewisetta - Barometric](#), [Wachapreague - Water Level](#), [Wachapreague - Winds](#), [Wachapreague - Barometric](#), [Ocean City Inlet - Water Level](#), [Ocean City Inlet - Winds](#), [Ocean City Inlet -](#)

Barometric, Duck - Water Level, Duck - Winds, Duck - Barometric, Beaufort, Duke Marine Lab - Water Level, Beaufort, Duke Marine Lab - Winds, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wilmington - Water Level, Wilmington - Barometric, Springmaid Pier - Water Level, Springmaid Pier - Barometric, Charleston, Cooper River Entrance - Water Level, Charleston, Cooper River Entrance - Winds

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



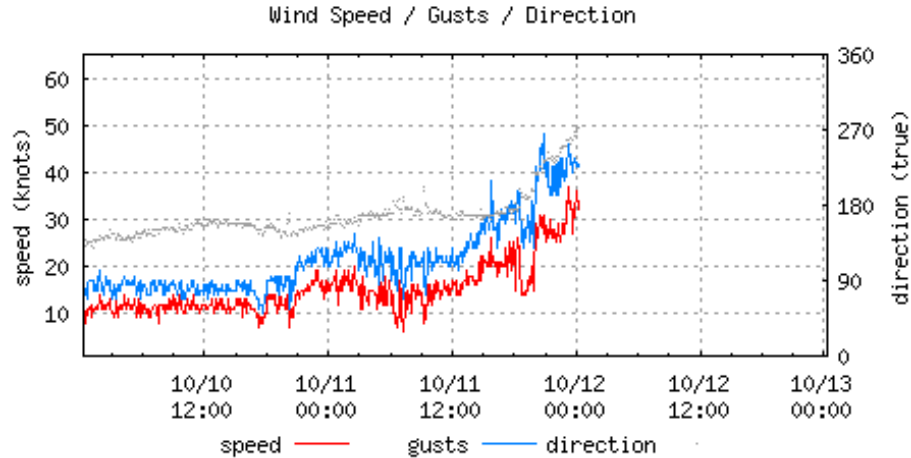
Last Observed Sample: 10/12/2018 00:18 (EDT). Data relative to MHHW

Observed: 1.96 ft. Predicted: -0.02 ft. Residual: 1.98 ft.

Historical Maximum Water Level: Oct 9 2016, 5.76 ft.

Next High Tide: 10/12/2018 11:33 (EDT), 0.11 ft.

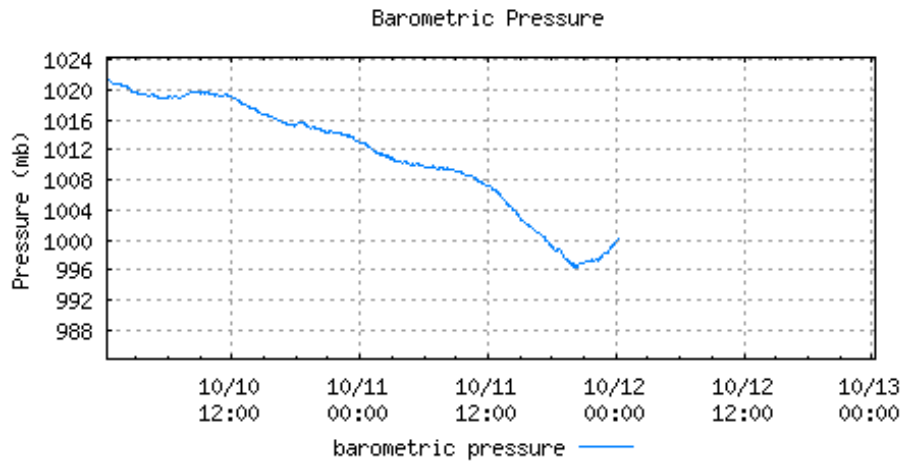
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



Last Observed Sample: 10/12/2018 00:18 (EDT)

Wind Speed: 32 knots Gusts: 41 knots Direction: 271° T

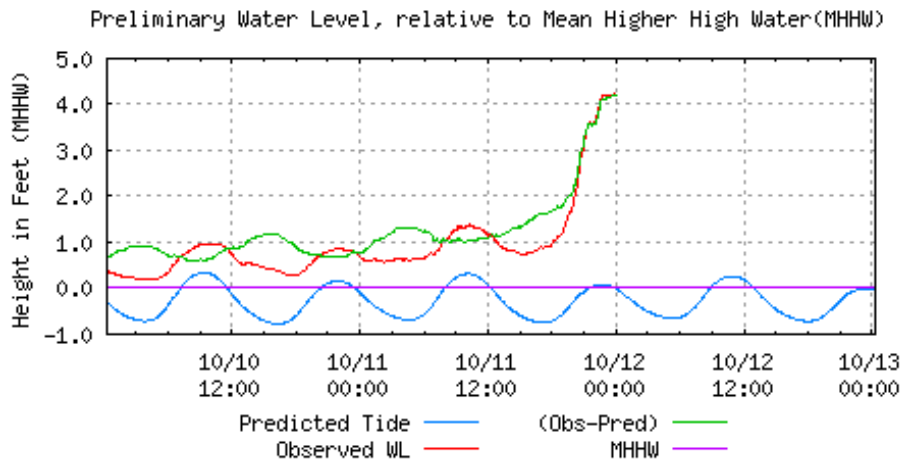
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



Last Observed Sample: 10/12/2018 00:18 (EDT)

Barometric Pressure: 1000.4 mb

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



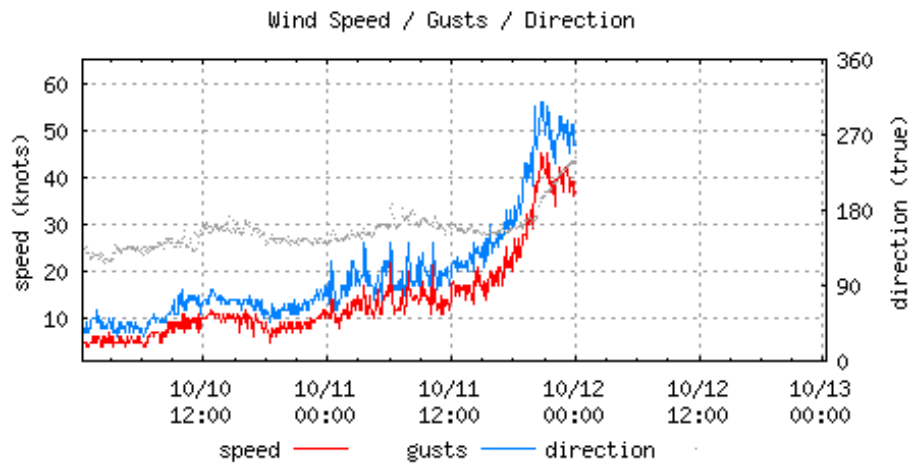
Last Observed Sample: 10/12/2018 00:06 (EDT). Data relative to MHHW

Observed: 4.24 ft. Predicted: -0.02 ft. Residual: 4.26 ft.

Historical Maximum Water Level: Aug 28 2011, 6.31 ft.

Next High Tide: 10/12/2018 10:52 (EDT), 0.26 ft.

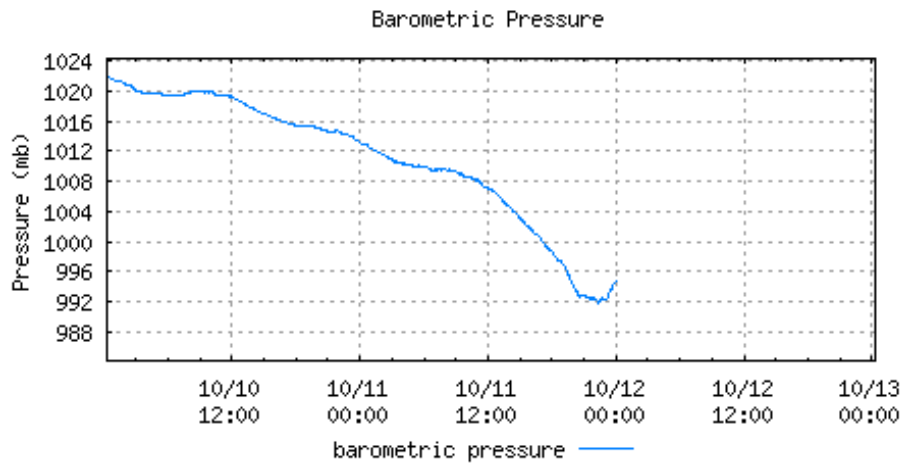
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



Last Observed Sample: 10/12/2018 00:06 (EDT)

Wind Speed: 37 knots Gusts: 49 knots Direction: 240° T

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

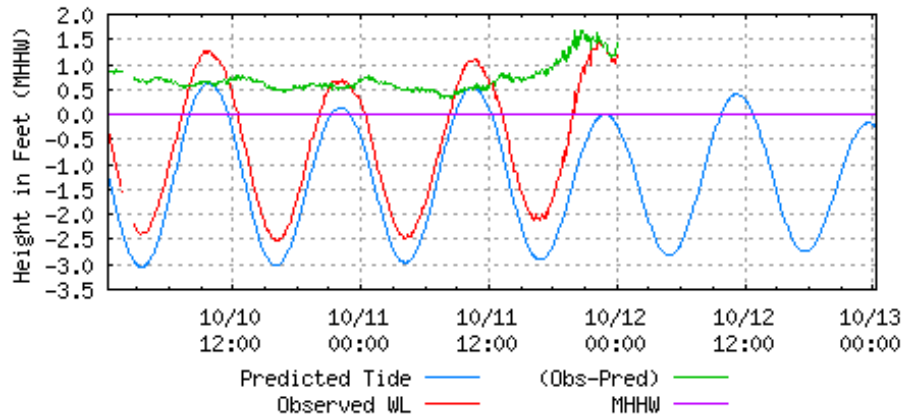


Last Observed Sample: 10/12/2018 00:06 (EDT)

Barometric Pressure: 995.1 mb

NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 10/12/2018 00:06 (EDT). Data relative to MHHW

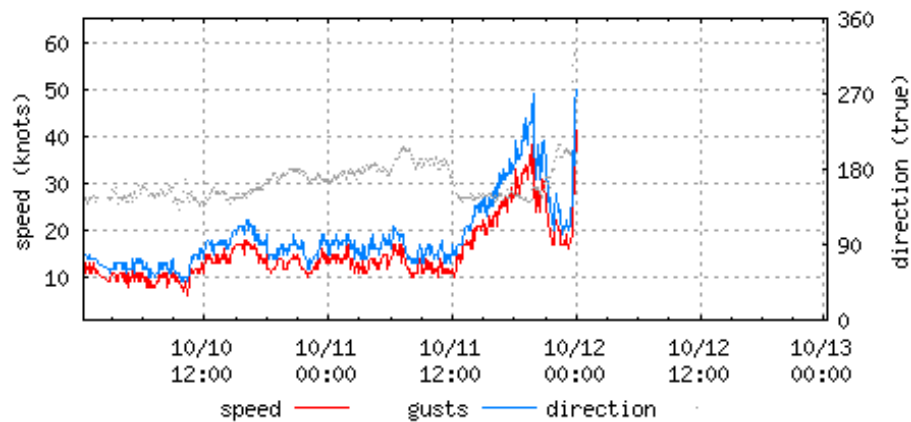
Observed: 1.21 ft. Predicted: -0.25 ft. Residual: 1.46 ft.

Historical Maximum Water Level: n/a

Next High Tide: 10/12/2018 11:13 (EDT), 0.40 ft.

NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Wind Speed / Gusts / Direction

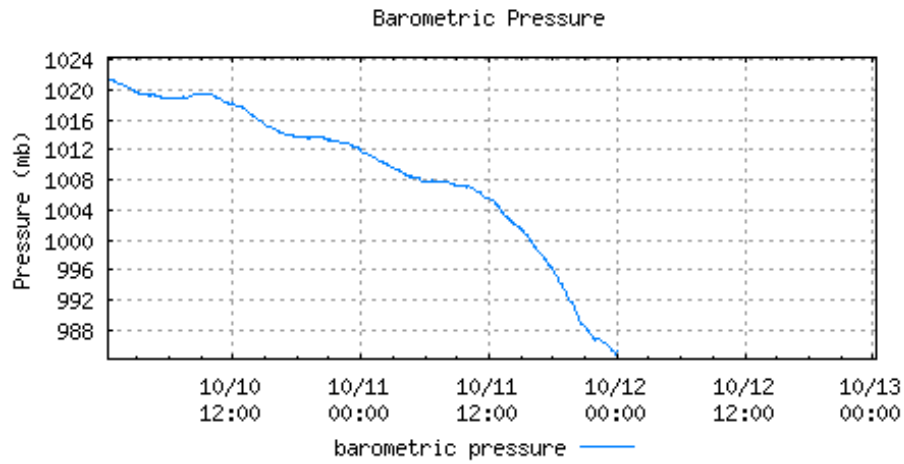


Last Observed Sample: 10/12/2018 00:06 (EDT)

Wind Speed: 42 knots Gusts: 56 knots Direction: 322° T



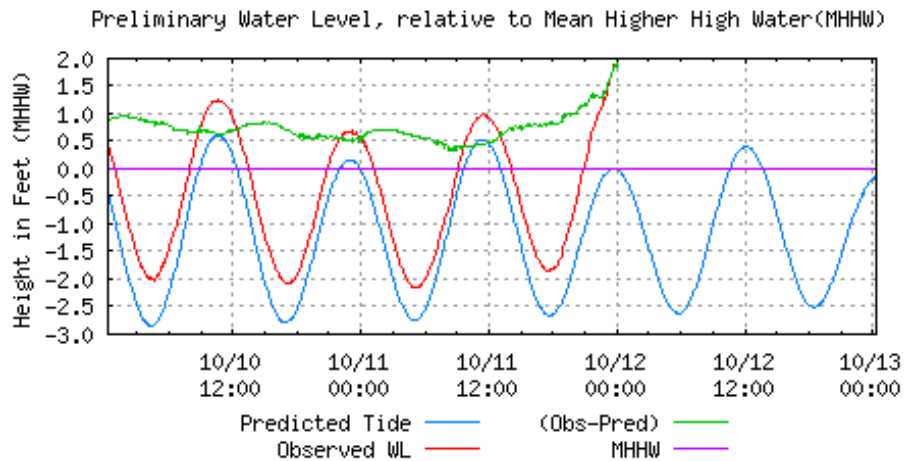
NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA



Last Observed Sample: 10/12/2018 00:06 (EDT)

Barometric Pressure: 985.3 mb

NOAA/NOS/CO-OPS 8638610 Sewells Point, VA



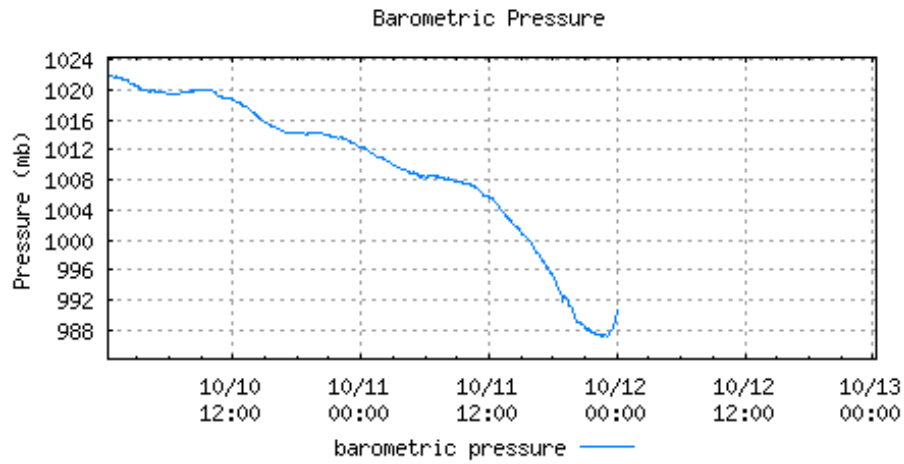
Last Observed Sample: 10/12/2018 00:06 (EDT). Data relative to MHHW

Observed: 1.92 ft. Predicted: -0.02 ft. Residual: 1.94 ft.

Historical Maximum Water Level: Aug 23 1933, 5.26 ft.

Next High Tide: 10/12/2018 12:07 (EDT), 0.40 ft.

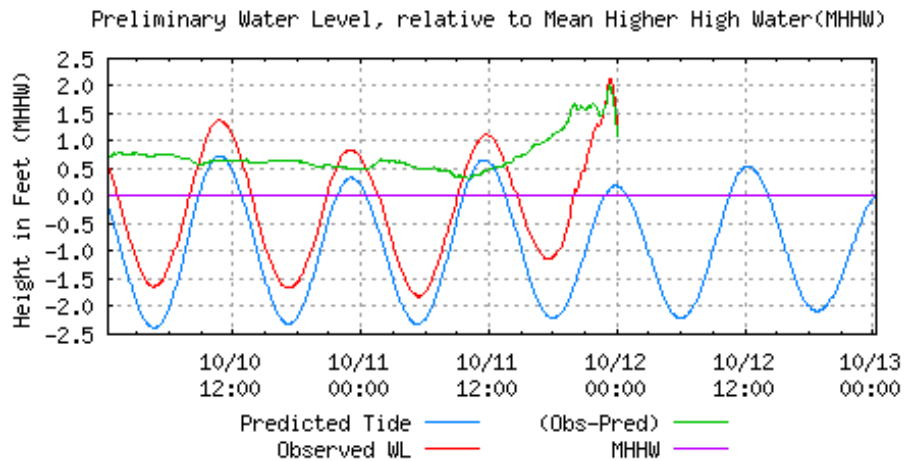
NOAA/NOS/CO-OPS 8638610 Sewells Point, VA



Last Observed Sample: 10/12/2018 00:06 (EDT)

Barometric Pressure: 990.6 mb

NOAA/NOS/CO-OPS 8637689 Yorktown USCG Training Center, VA



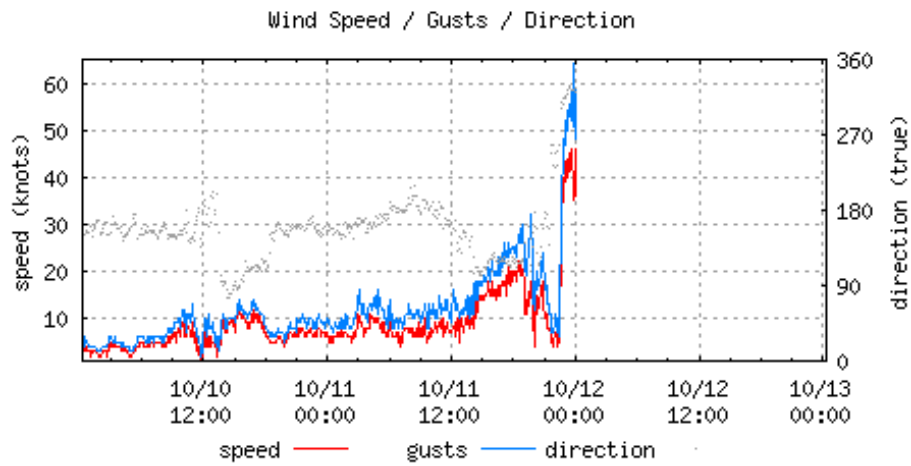
Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

Observed: 1.18 ft. Predicted: 0.17 ft. Residual: 1.01 ft.

Historical Maximum Water Level: Nov 13 2009, 4.27 ft.

Next High Tide: 10/12/2018 12:17 (EDT), 0.55 ft.

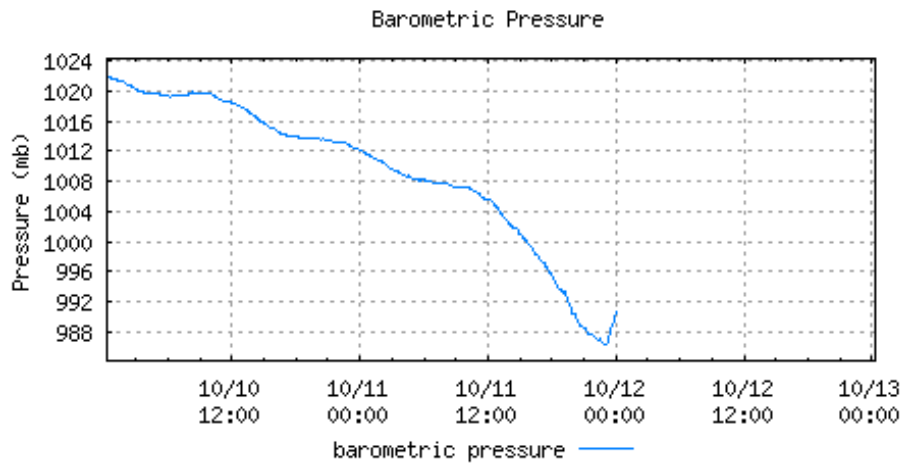
NOAA/NOS/CO-OPS 8637689 Yorktown USCG Training Center, VA



Last Observed Sample: 10/12/2018 00:12 (EDT)

Wind Speed: 41 knots Gusts: 50 knots Direction: 331° T

NOAA/NOS/CO-OPS 8637689 Yorktown USCG Training Center, VA

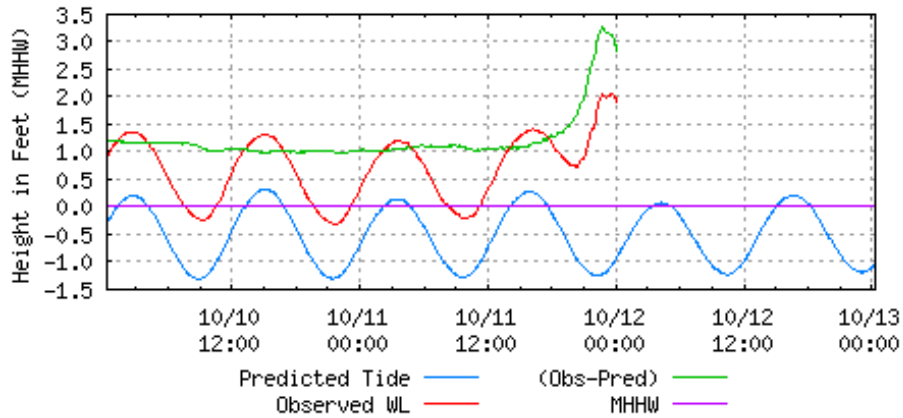


Last Observed Sample: 10/12/2018 00:12 (EDT)

Barometric Pressure: 991.1 mb

NOAA/NOS/CO-OPS 8635750 Lewisetta, VA

Preliminary Water Level, relative to Mean Higher High Water (MHHW)



Last Observed Sample: 10/12/2018 00:06 (EDT). Data relative to MHHW

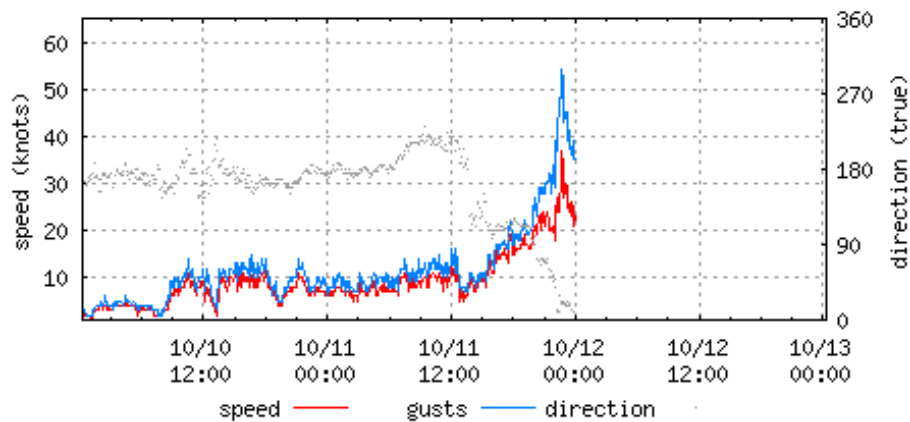
Observed: 1.91 ft. Predicted: -0.92 ft. Residual: 2.83 ft.

Historical Maximum Water Level: Sep 1 2006, 4.14 ft.

Next High Tide: 10/12/2018 04:17 (EDT), 0.08 ft.

NOAA/NOS/CO-OPS 8635750 Lewisetta, VA

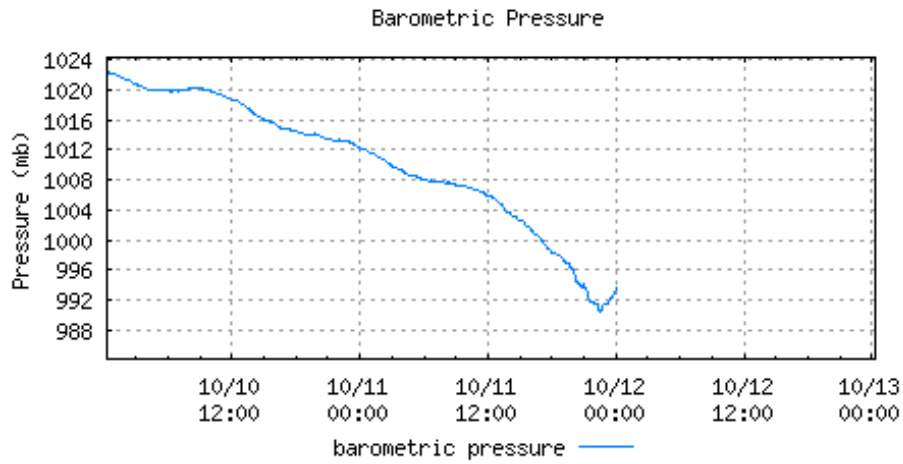
Wind Speed / Gusts / Direction



Last Observed Sample: 10/12/2018 00:06 (EDT)

Wind Speed: 22 knots Gusts: 35 knots Direction: 7° T

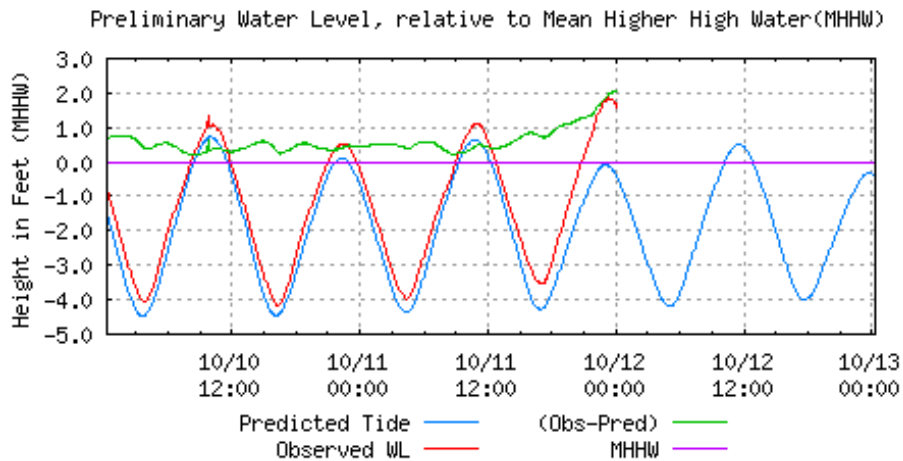
NOAA/NOS/CO-OPS 8635750 Lewisetta, VA



Last Observed Sample: 10/12/2018 00:06 (EDT)

Barometric Pressure: 993.7 mb

NOAA/NOS/CO-OPS 8631044 Wachapreague, VA



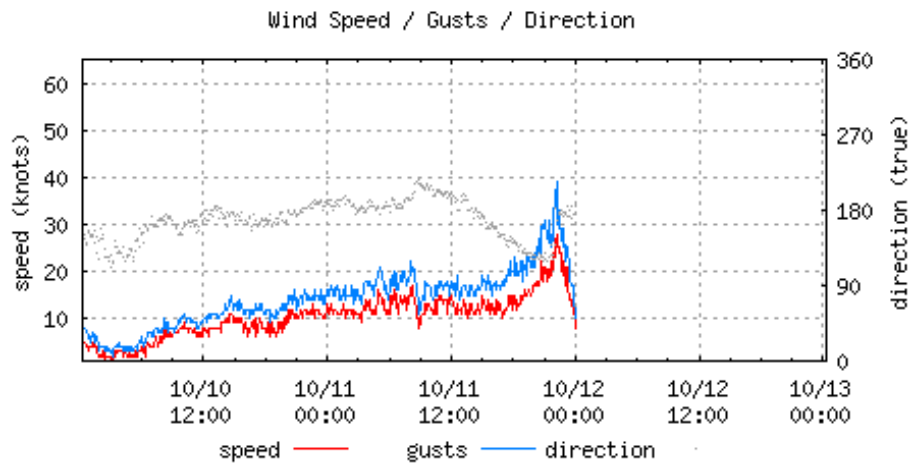
Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

Observed: 1.50 ft. Predicted: -0.50 ft. Residual: 2.00 ft.

Historical Maximum Water Level: Feb 5 1998, 4.41 ft.

Next High Tide: 10/12/2018 11:31 (EDT), 0.50 ft.

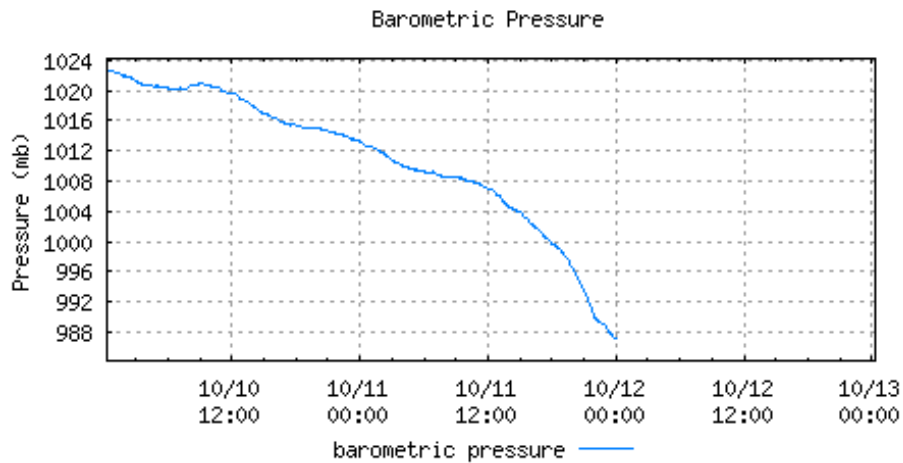
NOAA/NOS/CO-OPS 8631044 Wachapreague, VA



Last Observed Sample: 10/12/2018 00:12 (EDT)

Wind Speed: 6 knots Gusts: 10 knots Direction: 201° T

NOAA/NOS/CO-OPS 8631044 Wachapreague, VA

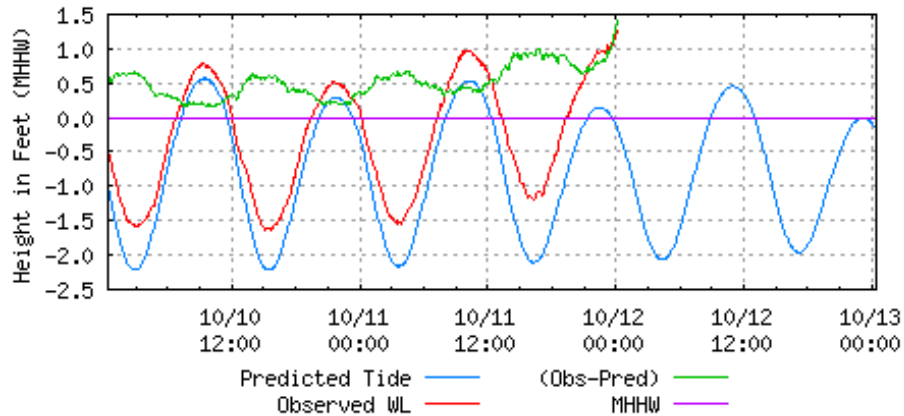


Last Observed Sample: 10/12/2018 00:12 (EDT)

Barometric Pressure: 987.4 mb

NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 10/12/2018 00:06 (EDT). Data relative to MHHW

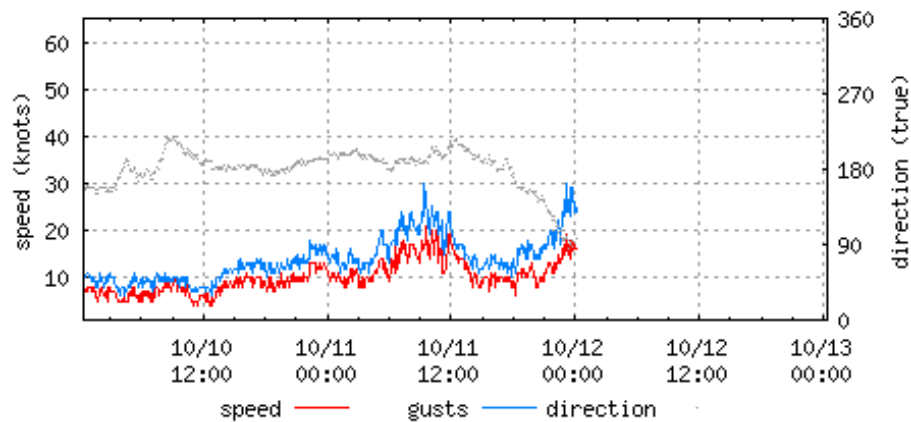
Observed: 1.26 ft. Predicted: -0.15 ft. Residual: 1.41 ft.

Historical Maximum Water Level: Feb 5 1998, 3.61 ft.

Next High Tide: 10/12/2018 10:56 (EDT), 0.46 ft.

NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD

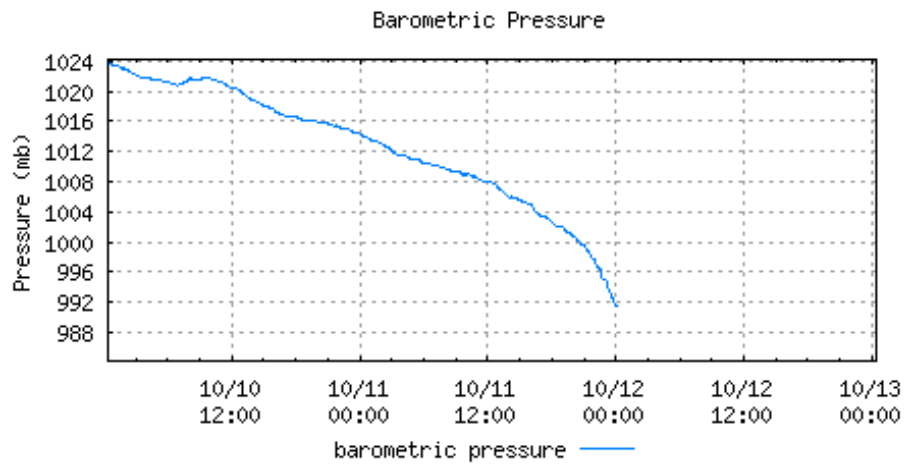
Wind Speed / Gusts / Direction



Last Observed Sample: 10/12/2018 00:06 (EDT)

Wind Speed: 16 knots Gusts: 24 knots Direction: 98° T

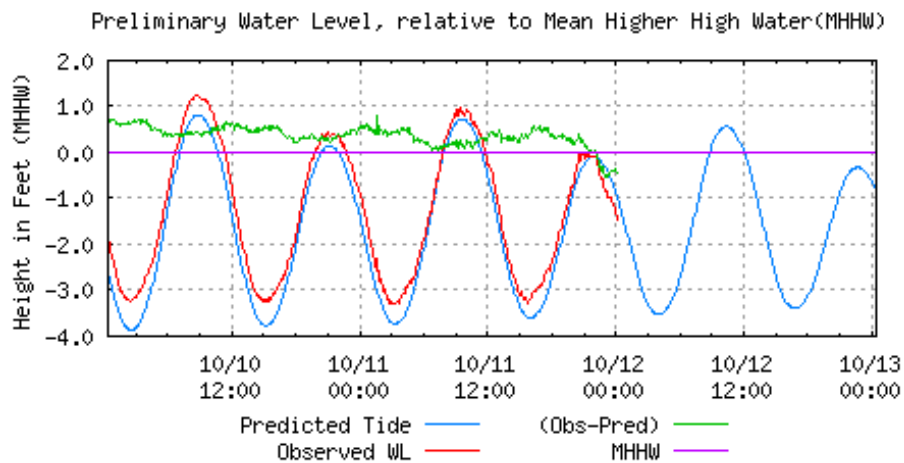
NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD



Last Observed Sample: 10/12/2018 00:06 (EDT)

Barometric Pressure: 991.4 mb

NOAA/NOS/CO-OPS 8651370 Duck, NC



Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

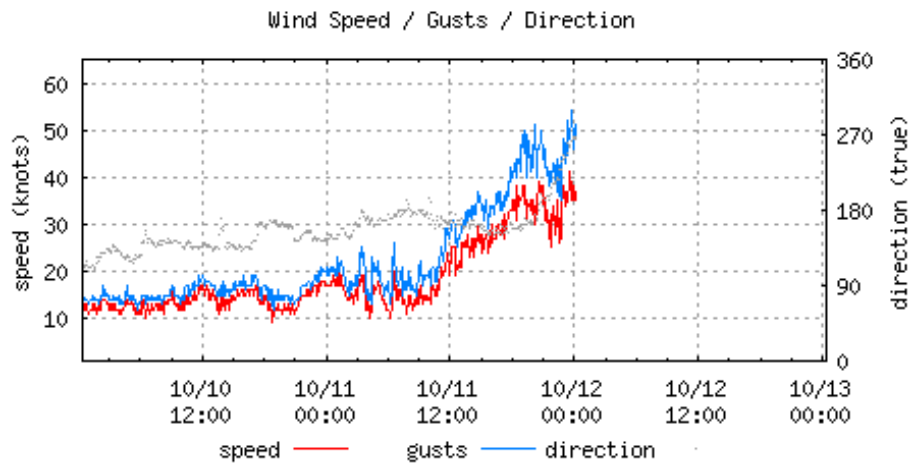
Observed: -1.48 ft. Predicted: -1.04 ft. Residual: -0.44 ft.

Historical Maximum Water Level: Sep 18 2003, 4.13 ft.

Next High Tide: 10/12/2018 10:20 (EDT), 0.57 ft.



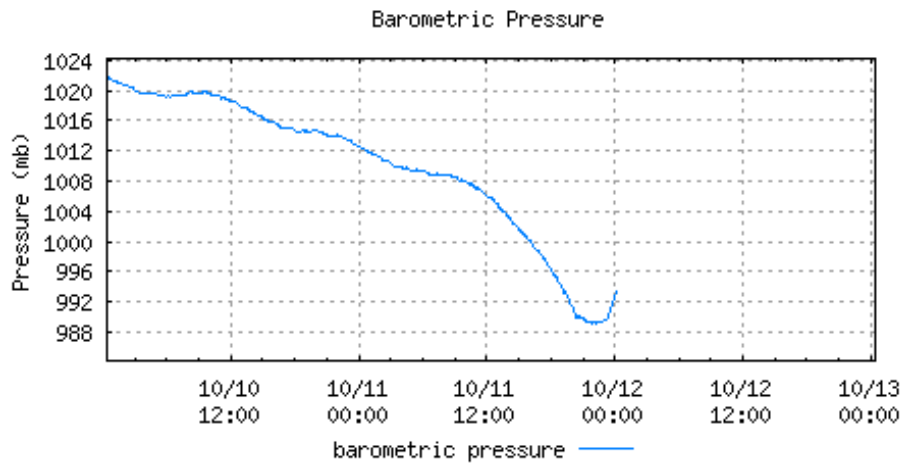
NOAA/NOS/CO-OPS 8651370 Duck, NC



Last Observed Sample: 10/12/2018 00:12 (EDT)

Wind Speed: 35 knots Gusts: 50 knots Direction: 266° T

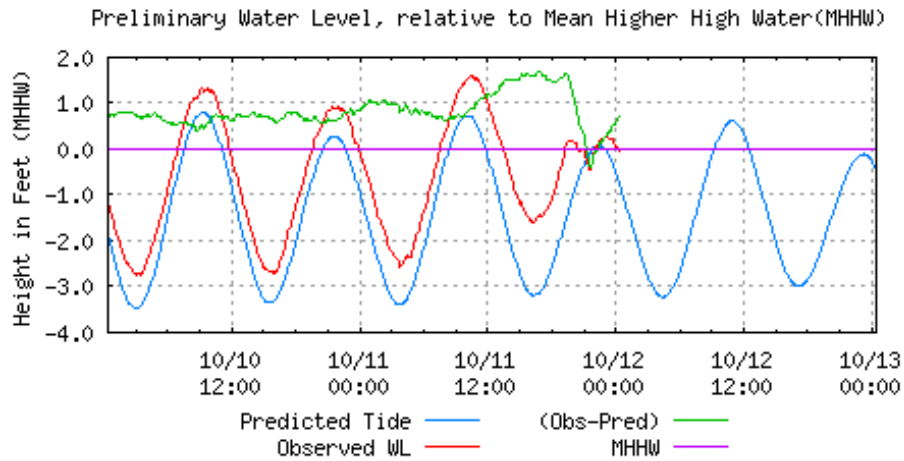
NOAA/NOS/CO-OPS 8651370 Duck, NC



Last Observed Sample: 10/12/2018 00:12 (EDT)

Barometric Pressure: 993.4 mb

NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC



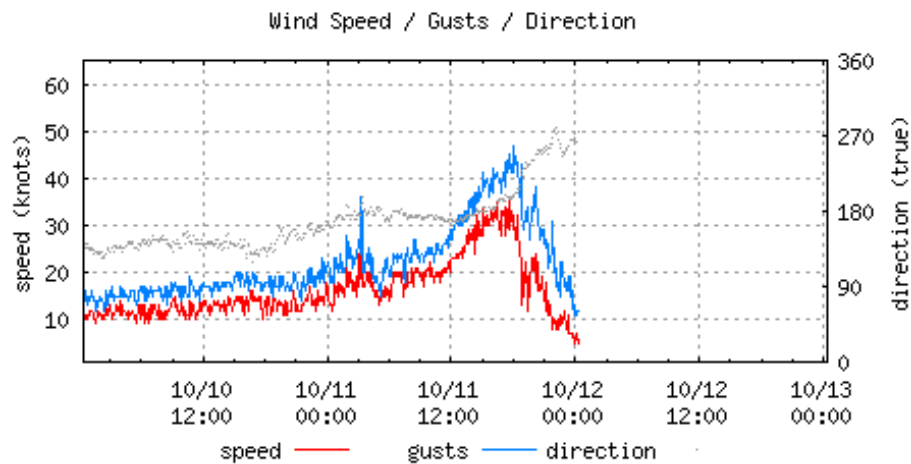
Last Observed Sample: 10/12/2018 00:18 (EDT). Data relative to MHHW

Observed: -0.03 ft. Predicted: -0.74 ft. Residual: 0.71 ft.

Historical Maximum Water Level: Sep 19 1955, 3.39 ft.

Next High Tide: 10/12/2018 10:53 (EDT), 0.61 ft.

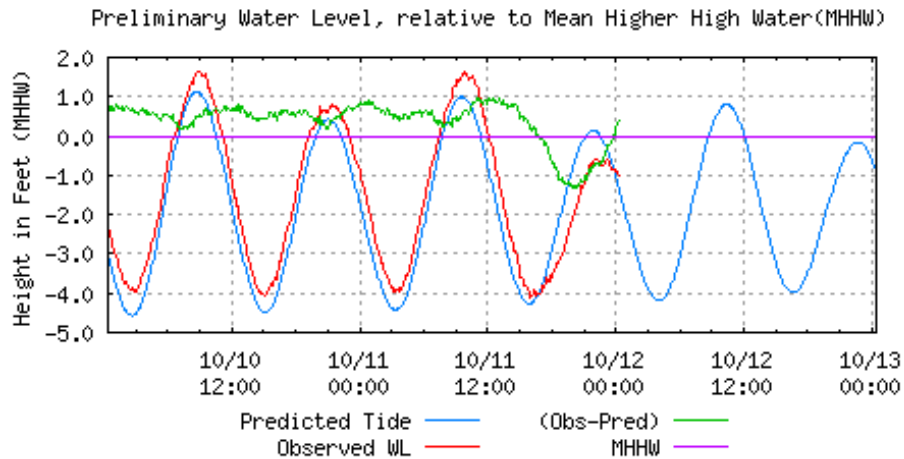
NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC



Last Observed Sample: 10/12/2018 00:18 (EDT)

Wind Speed: 5 knots Gusts: 12 knots Direction: 276° T

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC



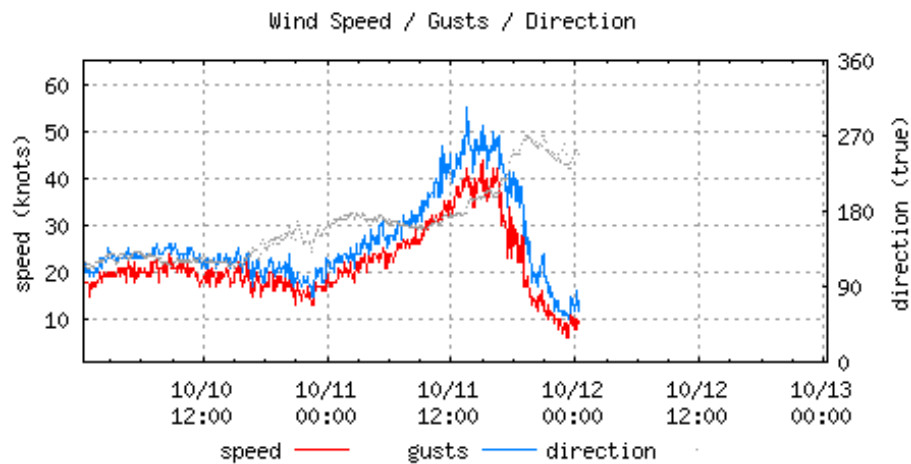
Last Observed Sample: 10/12/2018 00:18 (EDT). Data relative to MHHW

Observed: -0.98 ft. Predicted: -1.36 ft. Residual: 0.38 ft.

Historical Maximum Water Level: Oct 4 2015, 2.97 ft.

Next High Tide: 10/12/2018 10:23 (EDT), 0.81 ft.

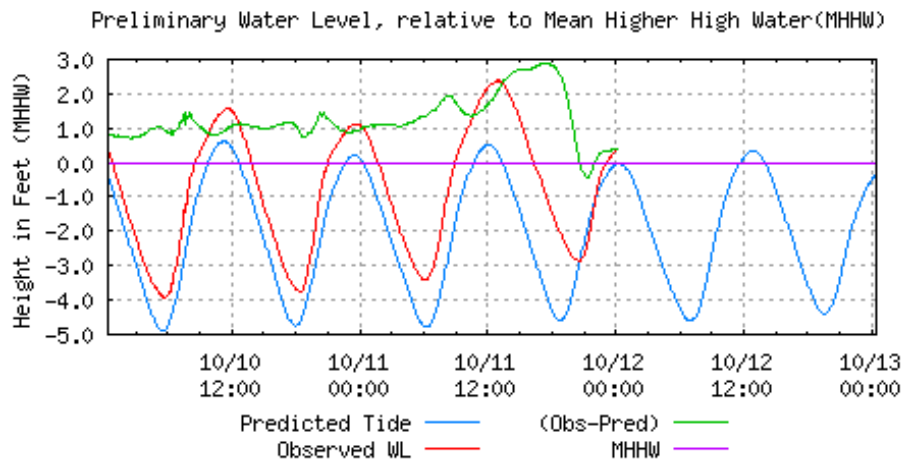
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC



Last Observed Sample: 10/12/2018 00:18 (EDT)

Wind Speed: 9 knots Gusts: 12 knots Direction: 248° T

NOAA/NOS/CO-OPS 8658120 Wilmington, NC



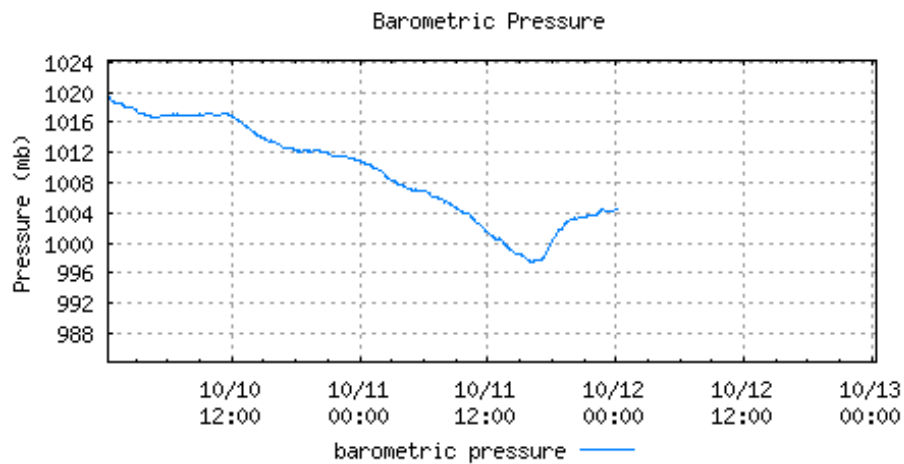
Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

Observed: 0.38 ft. Predicted: -0.02 ft. Residual: 0.40 ft.

Historical Maximum Water Level: Oct 8 2016, 3.48 ft.

Next High Tide: 10/12/2018 00:17 (EDT), -0.02 ft.

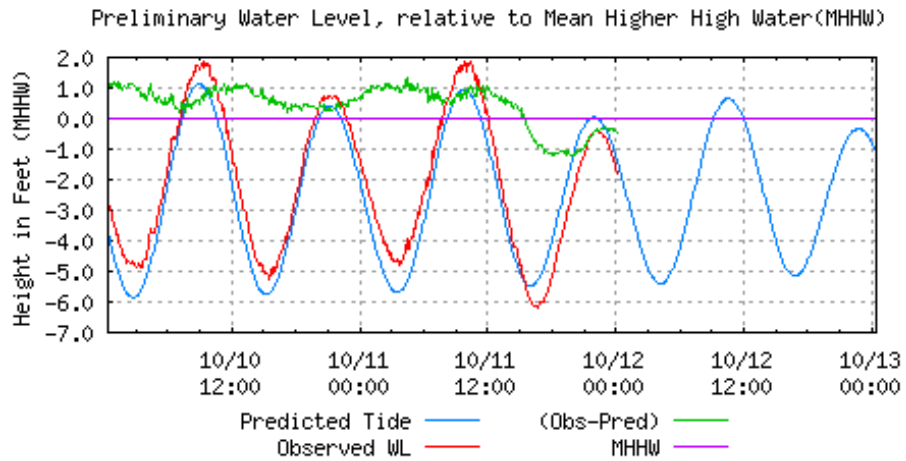
NOAA/NOS/CO-OPS 8658120 Wilmington, NC



Last Observed Sample: 10/12/2018 00:12 (EDT)

Barometric Pressure: 1004.5 mb

NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC



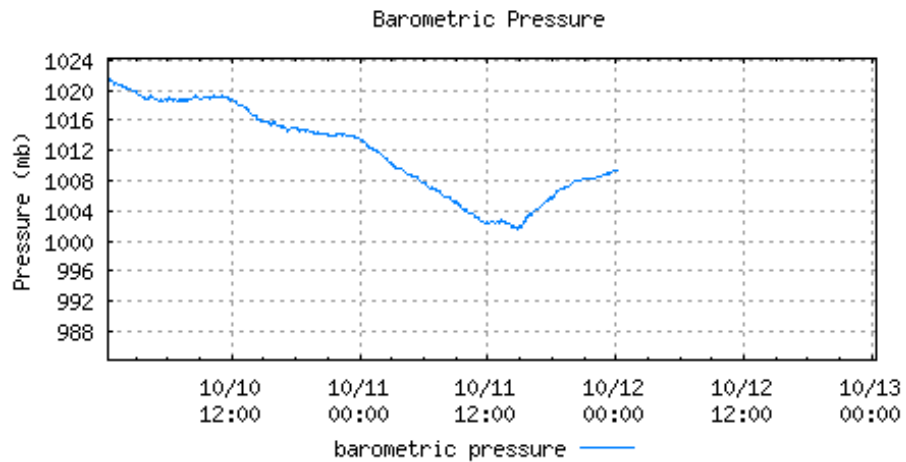
Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

Observed: -1.94 ft. Predicted: -1.49 ft. Residual: -0.45 ft.

Historical Maximum Water Level: Sep 21 1989, 8.77 ft.

Next High Tide: 10/12/2018 10:31 (EDT), 0.66 ft.

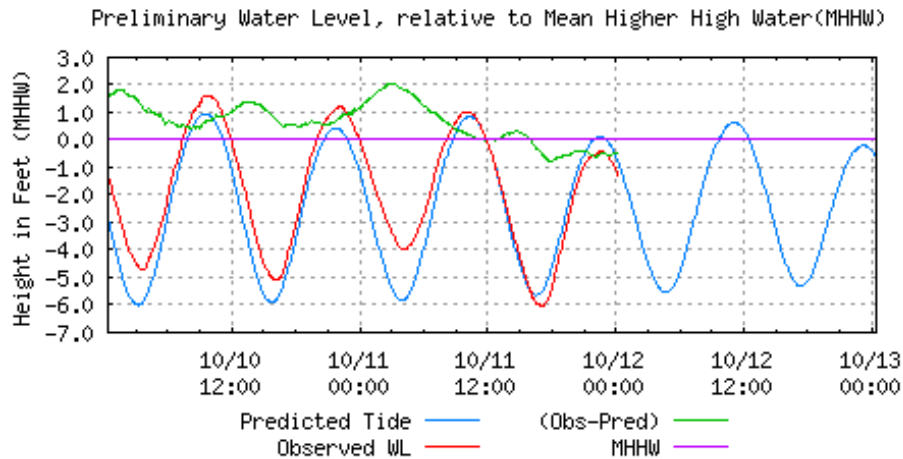
NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC



Last Observed Sample: 10/12/2018 00:12 (EDT)

Barometric Pressure: 1009.4 mb

NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC



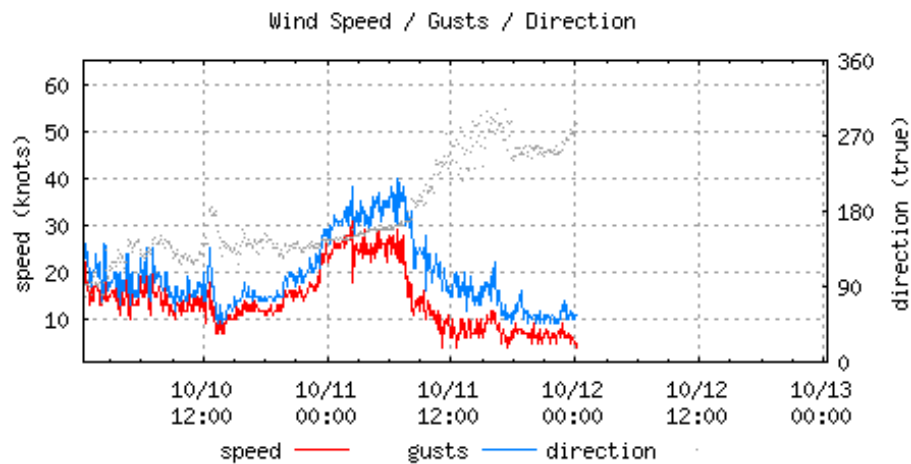
Last Observed Sample: 10/12/2018 00:12 (EDT). Data relative to MHHW

Observed: -1.31 ft. Predicted: -0.80 ft. Residual: -0.51 ft.

Historical Maximum Water Level: Sep 21 1989, 6.76 ft.

Next High Tide: 10/12/2018 11:05 (EDT), 0.62 ft.

NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC



Last Observed Sample: 10/12/2018 00:12 (EDT)

Wind Speed: 4 knots Gusts: 11 knots Direction: 276° T

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8654467	USCG Station Hatteras, NC	10/12/2018 00:18 (EDT)	1.96 ft	-0.02 ft	1.98 ft	2.09 ft
8652587	Oregon Inlet Marina, NC	10/12/2018 00:06 (EDT)	4.24 ft	-0.02 ft	4.26 ft	4.24 ft
8638901	CBBT, Chesapeake Channel, VA	10/12/2018 00:06 (EDT)	1.21 ft	-0.25 ft	1.46 ft	1.56 ft
8638610	Sewells Point, VA	10/12/2018 00:06 (EDT)	1.92 ft	-0.02 ft	1.94 ft	1.92 ft
8637689	Yorktown USCG Training Center, VA	10/12/2018 00:12 (EDT)	1.18 ft	0.17 ft	1.01 ft	2.13 ft
8635750	Lewisetta, VA	10/12/2018 00:06 (EDT)	1.91 ft	-0.92 ft	2.83 ft	2.07 ft
8631044	Wachapreague, VA	10/12/2018 00:12 (EDT)	1.50 ft	-0.50 ft	2.00 ft	1.85 ft
8570283	Ocean City Inlet, MD	10/12/2018 00:06 (EDT)	1.26 ft	-0.15 ft	1.41 ft	1.26 ft
8651370	Duck, NC	10/12/2018 00:12 (EDT)	-1.48 ft	-1.04 ft	-0.44 ft	0.98 ft
8656483	Beaufort, Duke Marine Lab, NC	10/12/2018 00:18 (EDT)	-0.03 ft	-0.74 ft	0.71 ft	1.60 ft
8658163	Wrightsville Beach, NC	10/12/2018 00:18 (EDT)	-0.98 ft	-1.36 ft	0.38 ft	1.64 ft
8658120	Wilmington, NC	10/12/2018 00:12 (EDT)	0.38 ft	-0.02 ft	0.40 ft	2.39 ft
8661070	Springmaid Pier, SC	10/12/2018 00:12 (EDT)	-1.94 ft	-1.49 ft	-0.45 ft	1.89 ft
8665530	Charleston, Cooper River Entrance, SC	10/12/2018 00:12 (EDT)	-1.31 ft	-0.80 ft	-0.51 ft	1.04 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS)  
National Oceanic and Atmospheric Administration | U.S. Department of Commerce